

Abstract of the Disclosure

A fuel cell assembly has a housing defining an electricity generation/combustion chamber, and electricity
5 generation/combustion means disposed within the housing. A fuel gas and an oxygen-containing gas are supplied to the electricity generation/combustion means, and a combustion gas formed within the electricity generation/combustion chamber is discharged from the
10 electricity generation/combustion chamber. A heat exchanger having a first channel and a second channel is disposed on at least one surface of the housing, the combustion gas is discharged from the interior of the electricity generation/combustion chamber through the
15 first channel of the heat exchanger, and one of the oxygen-containing gas and the fuel gas is supplied to the electricity generation/combustion means through the second channel of the heat exchanger. A plurality of electricity generation units are arranged in parallel within the
20 housing, and each of the electricity generation units includes a cell stack constituting the electricity generation/combustion means.